

ECR#: P02

Tracker #:

Status: Ratified

Title: New Component Height Restriction Area

Release Date: August 1999

Impact, High: Motherboard and chassis

**Spec Version: FlexATX Addendum Version 1.0 to the microATX
Motherboard Interface Specification V1.0**

Summary:

Because of a 32 percent reduction in area between FlexATX and microATX motherboards, the FlexATX component height restrictions may not allow enough flexibility in placing tall components on the motherboard. The height of the connector and mating connector cable for devices such as power, IDE, and floppy must be considered when placing components within the component height restrictions on the motherboard. For example:

- Some IDE assemblies measure ~0.720 inch [18.29mm].
- Most power cable assemblies measure ~1.200 inches [30.48mm].

If such connectors are placed on the motherboard in Area B where the specified maximum component height is only 0.600 inch [15.24mm], there is potential for interference with system components.

This ECR specifies a **new area** on the front, left side of the motherboard to allow greater height for motherboard components. We have modified Figure 3 to represent the new keepout area.

Change Current Specification As Shown:

On page 10, replace Table 4 with the new table provided below. Area F is new.

Table 4. FlexATX Motherboard Maximum Component Height and Keepout Restrictions

Area in Fig. 3	Maximum component height and keepout restrictions from motherboard primary side		Status
A	Maximum component height on motherboard:	2.100 inches [53.34mm]	Required
	Chassis keepout (chassis clearance over motherboard):	2.300 inches [58.42mm]	Required
	Chassis keepout (chassis clearance over motherboard):	2.800 inches [71.12mm]	Recommended
Note: there is a .200-inch difference between the 2.100-inch required motherboard maximum component height and the 2.300-inch required chassis keepout area.			
B	0.600 inch	[15.24mm]	Required
C	1.500 inches	[38.10mm] (see Notes below Figure 3)	Required
D	1.200 inches	[30.48mm] (see Notes below Figure 3)	Required
E	0.350 inch	[08.89mm]	Required
F	1.200 inches	[30.48mm] (see Notes below Figure 3)	Required

At the end of Section 2.3, replace Figure 3 with the new figure provided below. The last two note paragraphs below the figure are new.

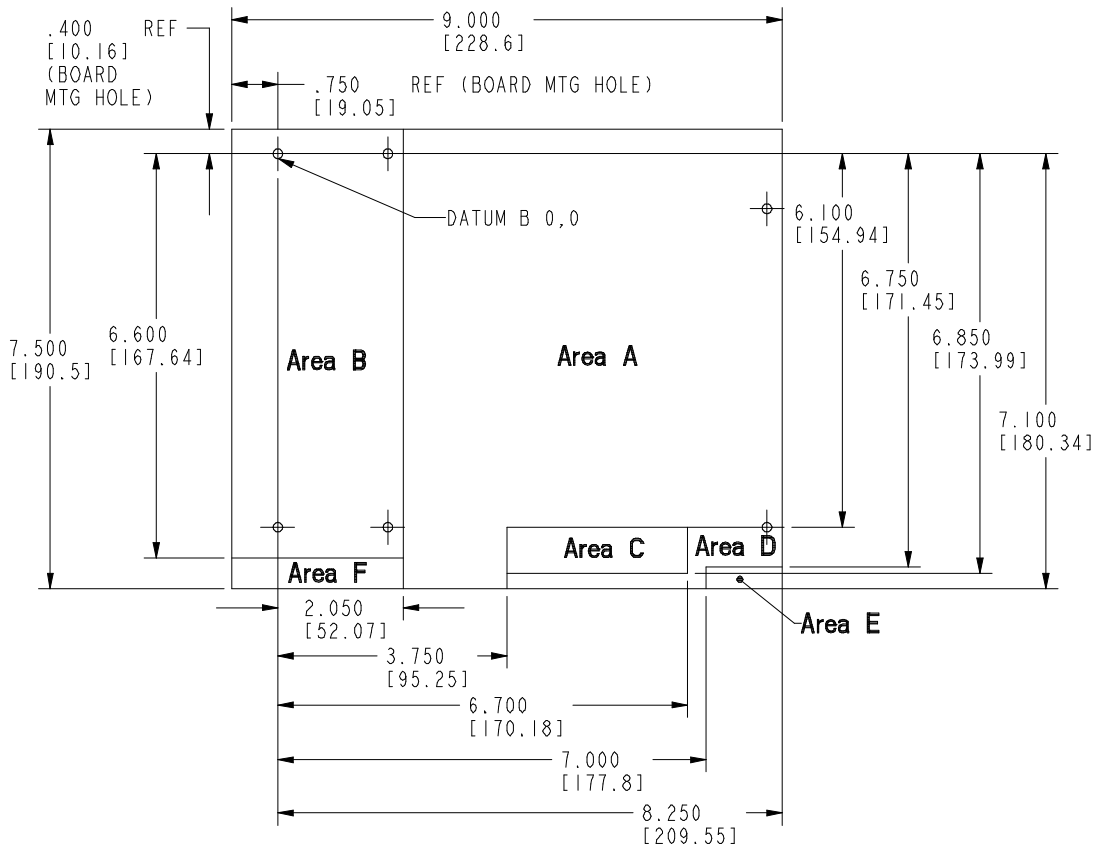


Figure 3. FlexATX Motherboard Maximum Component Height Restrictions

Notes

- Datum B 0,0 = mounting location hole B.
- The component height requirement assumes a motherboard thickness of 0.062 inch [1.57mm]. The maximum heights specified for Areas C, D, and E are intended to avoid interference between motherboard components and the chassis structure and to provide backward-compatibility with ATX 2.03 or higher.
- **For ATX and microATX only:** the **required** chassis keepout for Area A is 3.000 inches [76.20mm] to facilitate dynamic considerations of components in this area on the motherboard. The **recommended** (preferred) clearance is 3.500 [88.90mm] inches to facilitate cooling solutions that require ducting.
- Short length PCI adapter cards, as defined in the *PCI Local Bus Specification*, may be used in Area B without interfering with Area F. Longer adapter cards may be used if components in Area F remain less than 0.600 inch [12.24mm].
- System designers must take care to allow room for locking tabs on memory modules between Areas A and B.